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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/615,425

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Walter John Martiny JR.

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4863

7590

10/21/2004

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EXAMINER

ADDISON, KAREN B

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615,425

Applicant(s)

MARTINY, WALTER JOHN

Examiner

Karen B Addison

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11, 16-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 16-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 7-8, 16-22 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Sakashita (utility patent 6-009355) in view of Shiraishi(4515417).

Sakashita discloses in fig.1 an electric motor having a bearing current reduction assembly comprising: a motor housing (A), stator mounted to the housing comprising a bore (B) a rotor shaft (1) extending through the rotor core (8), and a end shield (5) an inner bearing cap (4&5D) substantially radially aligned with the rotor shaft (where in the inner bearing cap comprise a inner end (5d) and the inner end is with in approximately 0.005 inch from the rotor) which acts as a charge concentrator disposed on the inner end, wherein the charge concentrator is positioned between the rotor and inner end(fig.8 line 0019-0020) seperated from the inner bearing cap by a clearance configured to facilitate a current flow between the rotor shaft and the stator. Sakashita does not disclose the charge concentrator comprising a sharp edge.

Shiraishi discloses a bearing assembly in fig.3 comprising: a centrifugal contact point 7 (aka charge concentrator) including an edge disposed on one end of the shaft (2a) and an inner end of the bearing cap (3) for the purpose of concentrating an electrical charge (col.2 line 17-25). Therefore, it would have be obvious to one having ordinary skill in the

art at the time the invention was made to modify the bearing assembly of Sakashita and with the contact point of Shiraishi for the purpose of short-circuiting the rotor shaft and the end-cover at low speeds.

3. Claims 3-6 and 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Sakashita in view of Shiraishi as applied to claim 1-2 7-8,16-22,24 above, and further in view of Newberg(4710037).

As seen above, Sakashita in view of Shiraishi substantially discloses the claim invention. However, neither Sakashita nor Shiraishi disclose an end shield with an inner end made of aluminum material.

Newberg teaches in fig.3 a bearing retainer structure comprising: an end shield (2) having an inner end-bearing cap (12) made of aluminum material for the purpose of receiving and supporting the outer races of the bearing member (col. 2 line 45-48).

Therefore, it would have been obvious at the time the invention was made to modify the bearing assembly of Sakashita and the charge concentrator of Shiraishi with the teaching of Newberg Bearing retainer structure for the purpose of supporting the outer races of the bearing.

Response to Arguments

4. Applicant's arguments filed 8/3/2004 have been fully considered but they are not persuasive.

Applicant's argument that the insulator holder 4 and end plate 5D do not function as a charge concentrator is noted.

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However, Sakashita clearly shows in fig. 1 a motor housing (A), stator mounted to the housing comprising a bore (B) a rotor shaft (1) extending through the rotor core (8), bearing (2), a end shield (5) an inner bearing cap (4&5D) substantially radially aligned with the rotor shaft (where in the inner bearing cap comprise a inner end (5d) and the inner end is with in approximately 0.005 inch from the rotor) which acts as a charge concentrator disposed on at least one of the rotor shaft and the inner end, wherein the charge concentrator is position between the rotor and inner end (page 8 line 0019).

The paragraph stated " the shaft and the yoke sheet are electrically connected via bearing, so by grounding the yoke sheet to the chassis, static electricity is generated"(page 8 line 0019).

5. Applicant's argument that neither Sakashita nor Newberg disclose a charge concentrator is noted.

However, as stated above, Sakashita clearly discloses a charge concentrator position between the rotor and the inner end. (reference fig, 1 on page 8 line 0019).

Newberg teaches a bearing retainer structure in fig.3 comprising: an inner end-bearing cap (12) made of aluminum material for the purpose of receiving or supporting the bearing members (col2 line 45-48).

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

8. Applicant's argument that Sakashita fails to disclose a charge concentrator including a sharp edge is noted.

However, fig. 3 clearly shows a contact 7(aka charge concentrator) disposed on at least one of the rotor shaft (2a) and the inner end.

Sakashita also disclose the contact point (7) in contact with an electrically conductive endshield (4) when the motor is standing still or rotating at low speeds (col.2 line 17-25). Therefore, an electrically charge is dissipated across the bearing end cap and rotor shaft.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen B Addison whose telephone number is 703-306-5855. The examiner can normally be reached on 8:00 to 4:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1317. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

KBA
October 18, 2004


THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2834